Úvod do platebních karet

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Trendy v karetním byznysu

- Platební karty v ČR, v Evropě a ve světě
- Princip fungování platebních karet
- Trojstranné, čtyřstranné schéma
- Smluvní vztahy, poplatky, výnosy, náklady, on-us, Interchange/ Service Fee
- Settlement, Clearing, Rekonciliace

Typy karet a jejich nákladovost a výnosnost

- Debetní vs. Kreditní karty
- Charge a PrePaid karty
- Elektronické peněženky a alternativní platební metody
- Náklady a výnosy jednotlivých typů karet
- Soukromé vs. Firemní karty
- Životní cyklus platební karty: akvizice, aktivace, „Usage", retence
- Co-brandované karty – pozitiva a negativa, příklady projektů

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Payment card

A payment card is a financial instrument issued by a bank, credit union, or financial institution that allows individuals and businesses to make electronic transactions. These cards have become a ubiquitous and convenient method of payment, offering a wide range of benefits for both consumers and merchants. There are several types of payment cards, including credit cards, debit cards, prepaid cards, and others, each serving different purposes. Here's a brief introduction to payment cards:

Historically, bank cards have also served the purpose of a cheque guarantee card, a now almost defunct system to guarantee cheques at point of sale.

1967 - The first bank cards were automated teller machine (ATM) cards issued by Barclays in London

1972 - Lloyds Bank issued the first bank card to feature an information-encoding magnetic strip, using a personal identification number (PIN) for security.

1979 - The smart card, which was introduced in the 1970s, was adapted for use as a payment card. Smart payment cards were introduced to the banking sector

	Global Schemes	**Local Schemes**
Scope	**International Presence:**	**Regional or National:** Local schemes are typically limited to a specific country or region. They are designed to cater to the needs of users within that geographical area.
Acceptance	**Widespread Global Acceptance:**	**Limited Global Acceptance**: Cards may not be widely accepted outside their designated region.
Network	**International Networks:** extensive international networks that connect banks, merchants, and payment processors , transactions can be processed across borders seamlessly.	**Domestic Networks:** Transactions usually stay within the borders of the country or region. The processing and clearing of transactions are managed by domestic networks.
Regulation	**Compliance with Global Standards**	**Subject to Local Regulations**
Examples	Visa, MasterCard, American Express, and Discover are examples of global payment card schemes. These cards can be issued by banks around the world and are recognized by merchants globally	RuPay in India, Interac in Canada, and Cartes Bancaires in France.

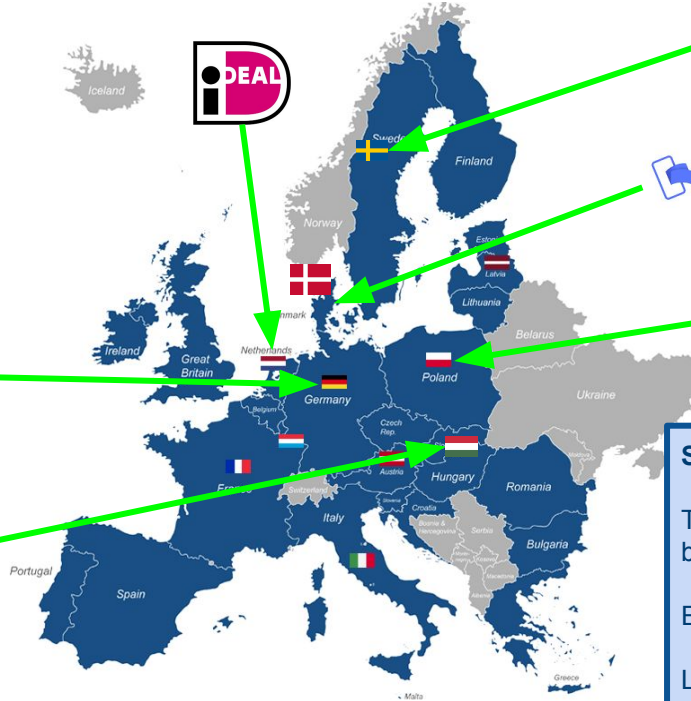# Examples of successful alternative payment schemes

Domestic schemes generate 40% of the volume of card transactions

The European Mobile Payments Solution brings together providers of alternative mobile methods in Europe - it already has 14 members

swish
Betala enklare

BankID

bankgirot

MobilePay™

blik

> 50% on-line

girocard

> 80% instore

AFR

Success criteria

The local scheme is supported by a group of banks with a majority market share

Ease of use and wide acceptance network

Lower transaction costs, new services and benefits, ideally both

EPI - Europian Payment Initiative

established 2.7.2020

EPI's ambition is a joint Instant Pay/SEPA Instant Credit Transfer (SCT Inst) payments scheme that would offer cards, a digital wallet and P2P payments for customers and merchants across Europe. The solution is intended to be the new European standard for all types of transactions including payments in stores, on the Internet, cash withdrawals and "peer-to-peer" payments as an alternative to existing global schemes such as Visa and Mastercard (and probably also WeChat and Alipay in the future) . It is one of the other attempts in this direction, which can be successful also considering that Covid 19 increases the pressure on contact-free, in-app, omni-channel payments.

MOTIVATION, BENEFITS AND FOCUS OF EPI

- **Client-driven payment evolution**
- **The basis is instant payments primarily for the SEPA area**
- **Full use of PSD2 and other regulations**
- **Balance between digitization and customer use**
- **Digital currencies**
- **Stable, regulated environment**
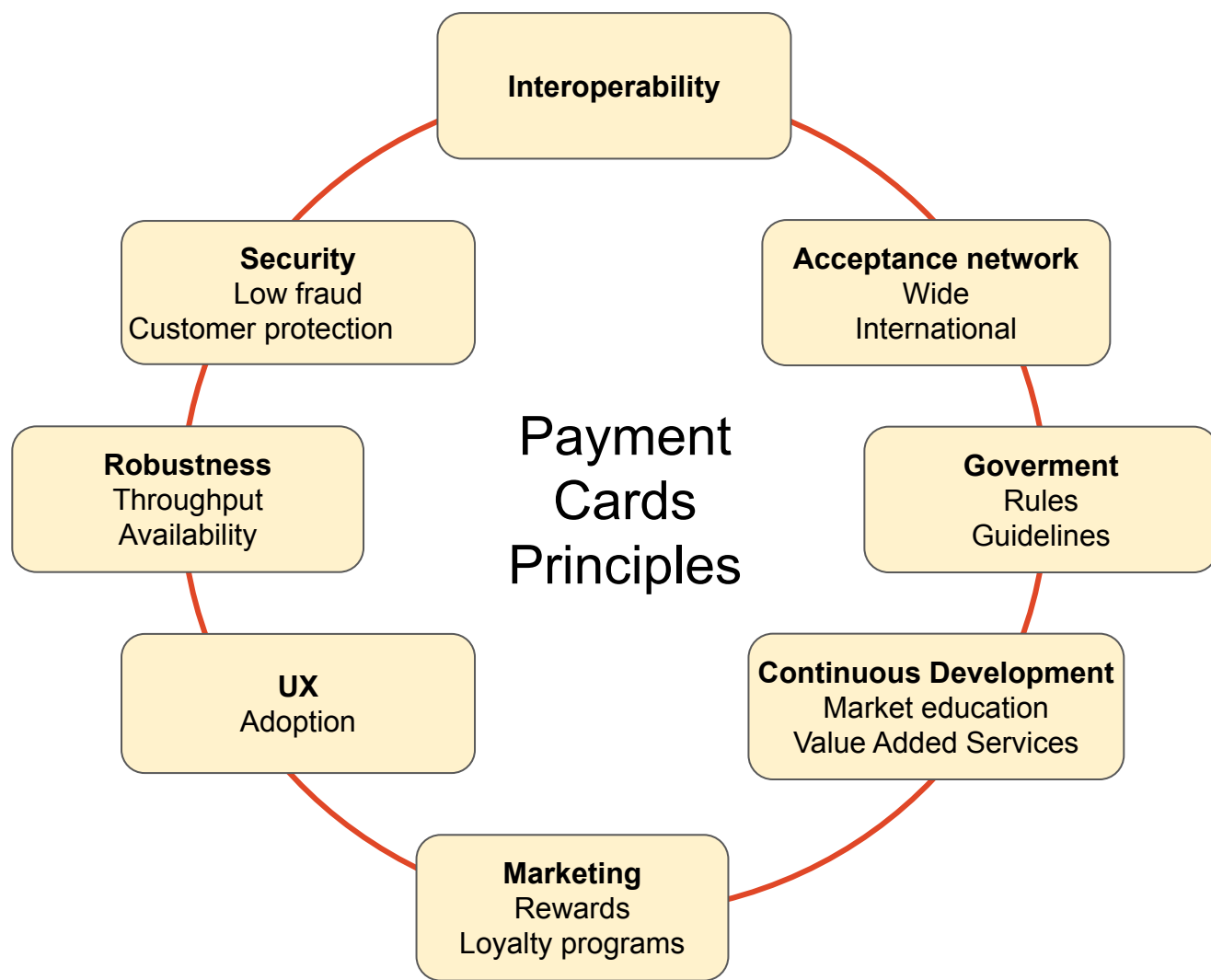
EPI LIMITATIONS

- **It is one of several European payment initiatives**
- **Primarily focused on Eurozone countries**
- **Must take into account existing domestic schemes (FR, DE)**
- **Probably a long time for practical use**
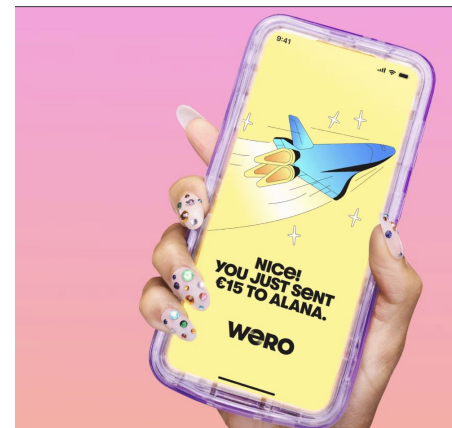
Payment card schemes

Payments Cards - Parties Involved

- Cardholder
- Card-issuing bank
- Merchant
- Acquiring bank
- Credit Card association
- Processor/Gateway
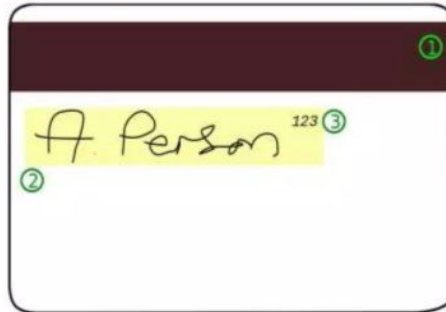
Structure of a Card

Front View

1. Issuing Bank logo
2. EMV chip (only on "smart cards")
3. Hologram
4. Card number
5. Card Network logo
6. Expiration date
7. Cardholder's name
8. Contactless Chip

Back View

1. Magnetic stripe
2. Signature strip panel
3. Card Security Code

BIN: Bank Identification Number
NFC: Near field communication

PCI DSS: Payment Card Industry Data Security Standard.
PIN: Personal Identification Number

What data is sent in a transaction?

Merchants send payment information for each customer purchase to the network and ultimately to the bank's processor.

Card Present Authorization

Transactions, simply put, are when you are present at a point-of-sale terminal with your card or mobile device.

Typical data elements include; merchant identifiers, method of entry, transaction total, card number, card expiry date, currency code, plus a few others. For multi-factor authentication transactions (i.e.PIN Debit), the consumer's PIN is passed in a securely encrypted field. For EMV transactions there are additional data elements passed which include a unique identifier for each transaction to validate the card is not counterfeit.

- Chip contact
- Contact less
- Mag stripe
- **Consumer Device Cardholder Verification Method (CDCVM)**

- PIN
- Signature
- Floor limit/Low value transaction - no CVM

Card Not Present Authorization

Situations occur when you are not physically swiping, dipping or tapping a card at a point-of-sale terminal, such as purchasing goods and services online or through a mobile phone application. This also includes phone-in orders. There is a big difference between CP and CNP in terms of liability and cost to merchants.

If a merchant is using a card network sponsored fraud mitigation tool like 3DSecure and SCA, then specific data values are passed indicating the merchant utilized the 3DSecure toolset. Most of the data elements used in authorization are also passed in settlement, excluding CVV2.

- On-line
- MOTO
- Card on-file

- SCA
- CVV
- OTP (One time password)

Virtual Cards

- A card for which no plastic is produced

- Typically used for e-commerce MOTO and other card-not-present transactions, as well as 'lodge card' programs

- CVV2/CVC2 value can be generated if needed

- Can be replaced with a new card if card details are compromised

- Can be permanent or one time use only

Parties in Tokenization

Payment Schemes

- Visa Token Service (VTS)

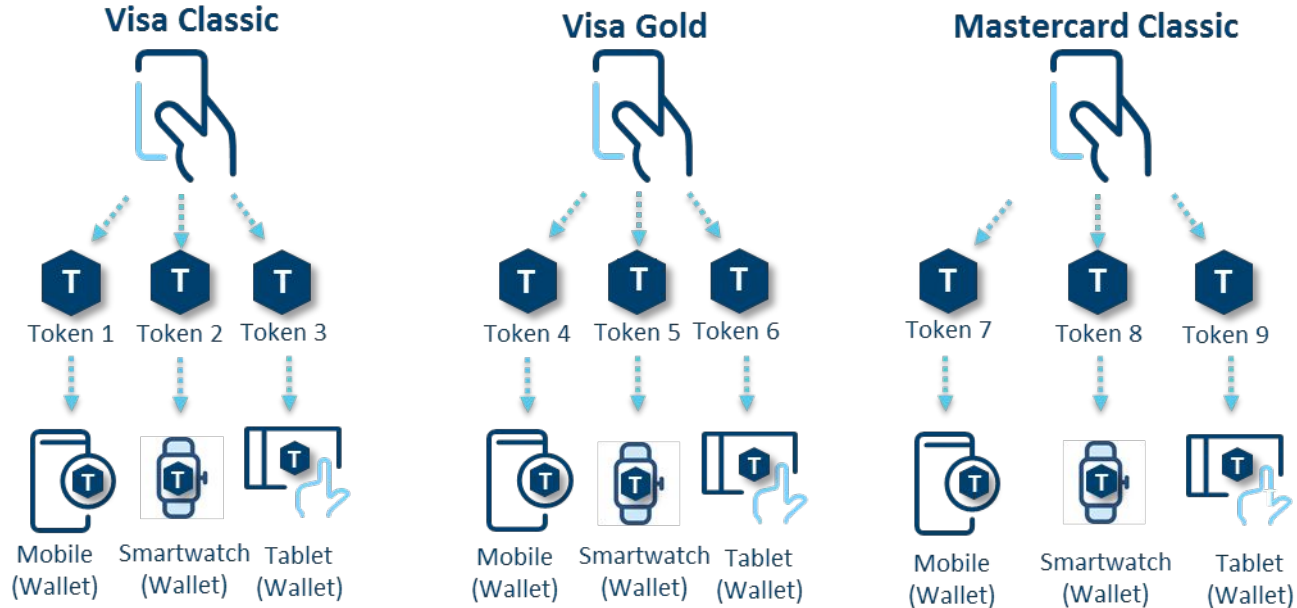- Mastercard Digital Enablement Service (MDES)

Wallets

- ApplePay
- SamsungPay
- GooglePay
- GarminPay
- Bank own wallet
- Others

Token Relationship

- One card to multiple tokens
- Change of status on card affects all tokens
- Tokens can be managed individually

Token relationship

Stages of tokenization

Tokenization can broken down into 3 stages:

- **Provisioning:** the process of requesting and receiving a token. Once approved the token is 'provisioned' – i.e. created and stored on the mobile device.

- **Transaction Processing:** the process of using a token to initiate a digital payment transaction

- **Lifecycle Management:** the process of managing and maintaining the token throughout its entire lifecycle.

Typical Customer Service Actions

Customer Related Actions

- Add/Change address
- Change credit limit
- Change embossing name
- Change status
- Change currency.

Card Related Actions

- Change product
- Change profile
- Reissue card
- Renew card
- Replace card
- Change embossing details
- Change authorization information
- Change statuses.

Financial Account Actions

- View balance/payments
- Change credit limit
- Generate letter
- Close account
- Change profiles
- Send account to Collection
- Change statement billing cycle
- Change billing details.

Other

- Manage reward points, redemption, etc.
- View transaction history
- Define periodic cash limits
- Define temporary Bonus
- Define periodic OTB replenishment.

Third Party System

Third-party payments involve an additional player, usually a payment processor, to execute the transaction in addition to the seller and buyer. The payment processor receives the customer's payment information, reviews it, and uses anti-fraud systems before approving the transaction completion.

Paypal is an excellent example of a third-party payment player. It uses the information of a credit card provided by the buyer account to process the transaction. At the same time, the merchant has no contact with any sensitive information.
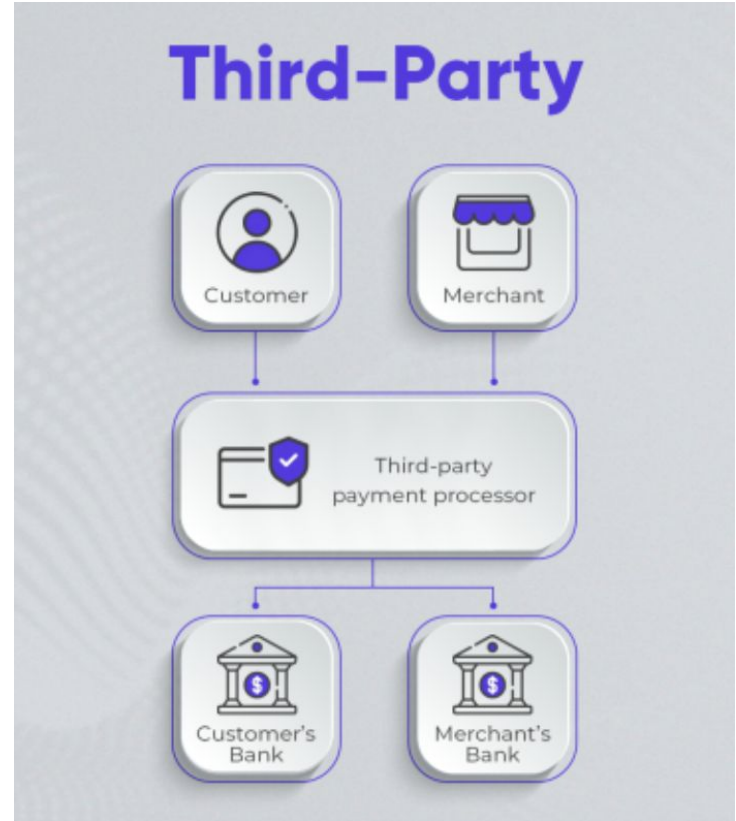
Four Party System

The card scheme uses its rules to transfer the card transaction information from the acquiring bank to the issuing bank (from the merchant to the consumer). It then passes the payment back to the acquirer to confirm the payment.

Credit and debit card schemes work with **four parties**. Together, these four parties make up an **open-loop system** that allows consumers to seamlessly purchase items or services from merchants by letting the banks do all the work on their behalf.
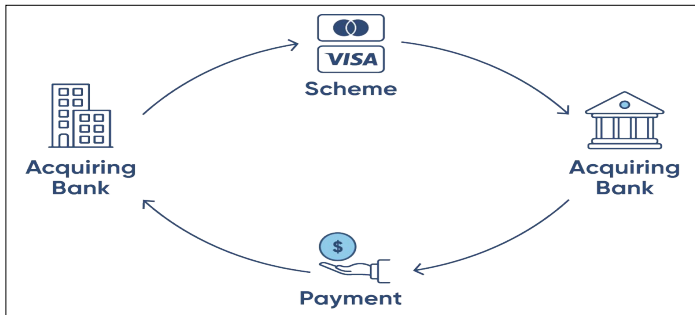
The cardholder:

Is the buyer. They hold the debit or credit card offered by their bank.

The card issuer:

It provides debit or credit cards from the card scheme to its qualifying customers. Issuers are banks (and other qualifying institutions). Even when the card is branded (such as an airline loyalty card), there is a bank or financial institution backing the card.

The merchant:

Is a retailer or a business that sells goods or services to the cardholder.

The acquirer:

Is the institution that provides a merchant service agreement to the merchant and processes the card transactions on their behalf.

Although these are the four primary players, there are also intermediaries that facilitate the transaction, including the payment gateway and the **payment processor**.

Smluvní vztahy, poplatky, výnosy, náklady, on-us, Interchange/ Service Fee

Principal Issuing Agreement Schemes Fees

Principal Acquiring Memebership Schemes Fees

Scheme

Issuer

Acquirer

Processor

Processing services

Banking services incl. Payment Cards

Card Acceptance Agreement Blend or MIF++

Consumer

Merchant

Goods or services
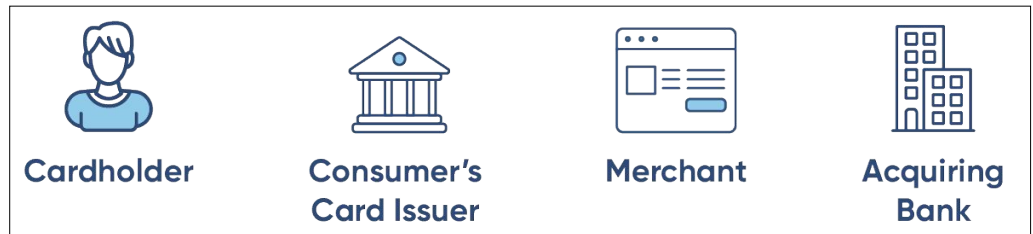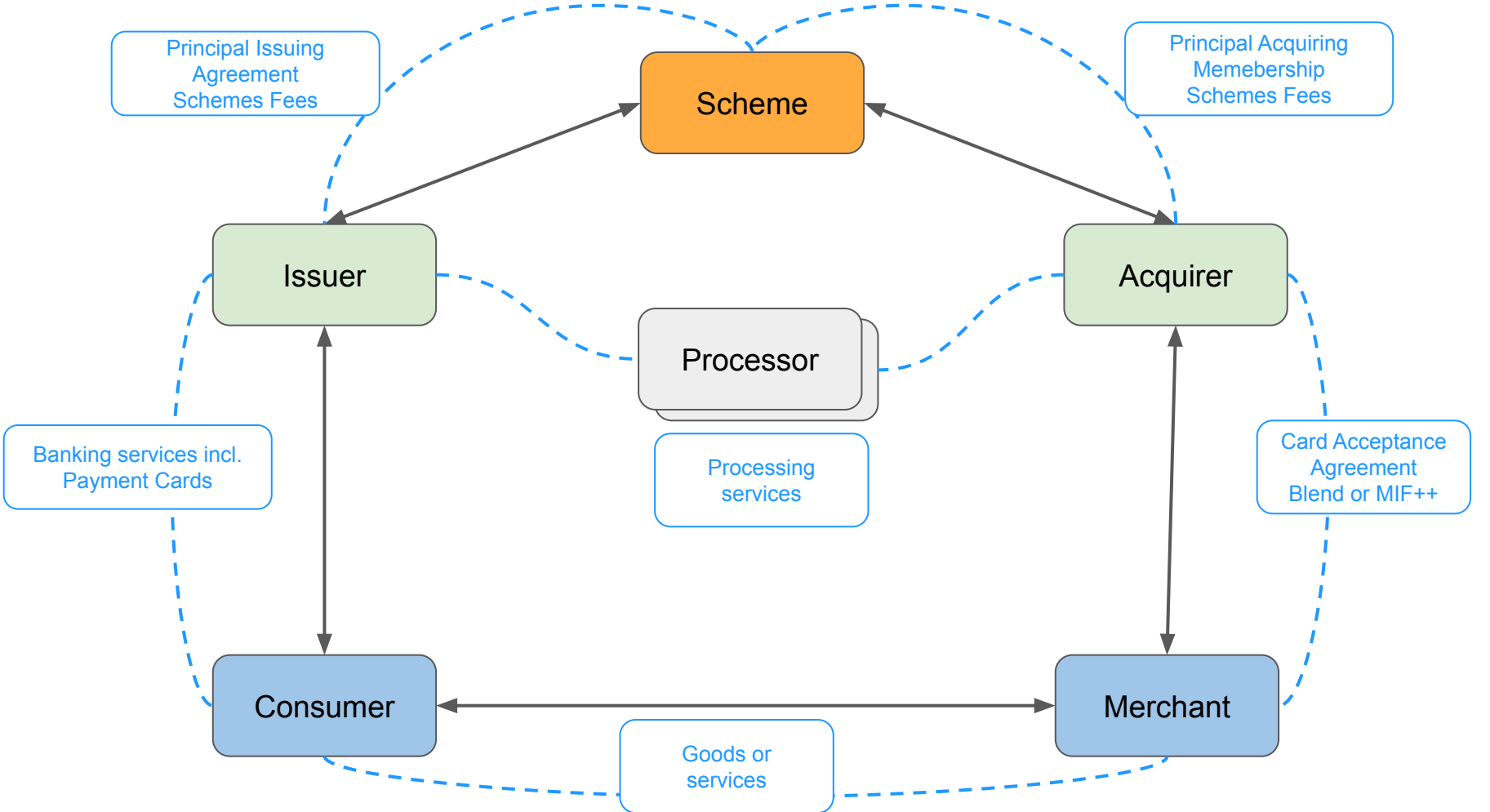
The fees paid on each transaction are the Scheme Fee - paid to the card brand such as MasterCard or Visa, the Interchange - paid to the customer's bank to cover the risk of the transaction, and the merchant service fee – paid to the merchant bank.

- Issuing Bank — • Interchange Fees
- Card Brand — • Scheme Fees
- Merchant Bank — • Merchant Service Fee
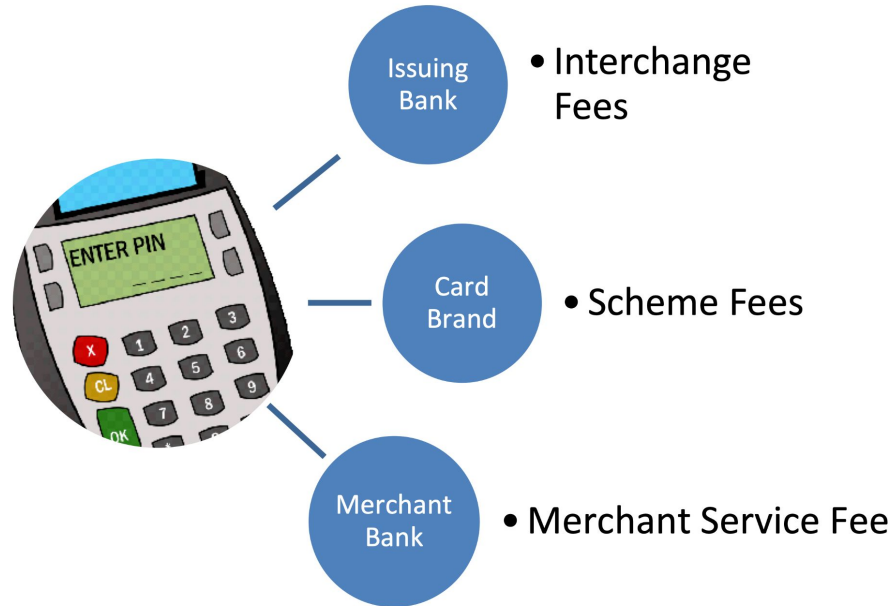
Interchange Fees

Payment Product	General	Comment	Who
Consumer Debit	0,20%	regulated	Acquirer to Issuer
Consumer Credit	0,30%	regulater	Acquirer to Issuer
Business	1,5% - 2,0%	non-regulated	Acquirer to Issuer
Meal Vouchers	2,5%	Non-regulated, RAN	Acquirer to Issuer
ATM Withdrawal	0,5 EUR	domestic	Issuer to Acquirer

Comments
- Fees are regulated in EU
- European interregional and intra-location (POS) interchange
- Domestic agreements e.g. ATM fees (AT - 0), Interchange Fee (PL Business Card the same as consumer)
- Cross border and international transactions have different conditions

Czech Republic - Domestic Interchange Fees

Consumer Card Interchange Fees

Payment Product	Fee Tier	IRD	General	Bill Payments (4)	Government
Mastercard Consumer Credit	Contactless Terminal (1)	PT	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Contactless Terminal High Value (2)	PV	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Contactless (1)	P2	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Contactless High Value (2)	P6	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Contactless Card	PC	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Chip	50, 53	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Merchant UCAF	24	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Full UCAF	79	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Base	75, 85	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Mobile Payment - Acquirer Domain	L7	0.30%	0.30% (Max CZK 1.4)	0.30% (Max CZK 4.5)
	Purchase at ATM (3)	AL	0.30%	-	-
	Purchase at ATM (late presentment) (3)	MT	0.30%	-	-
Mastercard Consumer Debit	Contactless Terminal (1)	PT	0.20%	0.20% (Max CZK 1.4)	0.20% (Max CZK 4.5)
Debit Mastercard Consumer	Contactless Terminal High Value (2)	PV	0.20%	0.20% (Max CZK 1.4)	0.20% (Max CZK 4.5)
Mastercard Consumer Prepaid	Contactless (1)	P2	0.20%	0.20% (Max CZK 1.4)	0.20% (Max CZK 4.5)
	Contactless High Value (2)	P6	0.20%	0.20% (Max CZK 1.4)	0.20% (Max CZK 4.5)
	Contactless Card	PC	0.20%	0.20% (Max CZK 1.4)	0.20% (Max CZK 4.5)
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	Purchase at ATM (3)	AL	0.20%	-	-
	Purchase at ATM (late presentment) (3)	MT	0.20%	-	-

Scheme fees are complex

Mastercard/Maestro Clearing Acquirer POS
Mastercard/Maestro Acquirer Volume Fee
Mastercard / Debit Mastercard Acceptance Development Fund
Mastercard/Maestro Acquirer Transaction Fee (POS)
Mastercard/Maestro Acquirer Authorisation Fee
Mastercard/Maestro Innovation Fund
Mastercard Market Development Fund
Mastercard/Maestro Card Payment Promotion Fund
Non-Trx based Card Scheme Fees
Mastercard/Maestro Acquirer Cross-border Fee (does not apply for intra EEA EUR trx)
Mastercard/Maestro Acquirer Card Not Present (CNP) Fee (does not apply for intra EEA EUR trx)
Mastercard/Maestro Acquirer Mail Order / Telephone Order (MOTO) Fee
Mastercard/Maestro Non-EMV / Non-Contactless Acquirer Fee
Mastercard/Maestro EMV 3DS Authentication Fee
Mastercard/Maestro EMV 3DS Authentication Fee - Recurring
Mastercard/Maestro EMV 3DS Card Add Fee
Mastercard/Maestro Address Verification Service Fee
Mastercard/Maestro CVC2 Fee
Mastercard/Maestro Acquirer Performance Development – No Authentication

Mastercard/Maestro Acquirer Performance Development – Not tokenized COF
Mastercard/Maestro Exemption Indicator Fee
Mastercard/Maestro Authorisation Integrity Fee
Mastercard/Maestro PreAuthorisation Fee
PSD2 - Key Entered Transaction Fee
PSD2 - Chip transactions without CVM Fee
Mastercard Reattempts Fee
Mastercard Single Tap Enablement Fee
Global Wholesale Travel Transaction Program Fee (no Authoris, Clearing&Settlement and Cross-border Fees for GWTTP Trx)
Mastercard Freight Program - Acquirer Scheme Fee (no Volume- / Reported Trx- / CNP- / MOTO Fees)
Mastercard Freight Program - Acquirer Switch Fee (no Authoris- / PreAuth Fees, no Clearing & Settlement Fees)
Visa Acquirer Clearing & Settlement Fee
Visa Acquirer Authorization Fee
Visa Business Development Contribution
Visa Innovation and Market Development Fee (IMD)
Non-Trx based Card Scheme Fees
Visa Acquirer Card Present Service Fee
Visa Acquirer Card Not Present Service Fee
Visa International Acquiring (F2F & CNP)
Visa International Acquiring CNP Fee
Visa International Acquiring (F2F & CNP) - UK issued
Visa International Acquiring CNP Fee - UK issued

Visa Secure Credential CNP Fee
Visa Non-Domestic Settlement Currency Volume Fee
Visa Estimated and Incremental Authorization Fee
Visa Non EMV Terminal Fee
Visa 3DS Acquirer Authentication Request Fee
Visa Address Verification Service
Visa Reattempts Fee
Acquirer B2B Virtual Service Fee (no Authorization, Clearing & Settlement & International Fees apply)
Reversal Fee (applies only for reversals processed via the Visa network)

Additional Fees to Customer

Card surcharge fee

A surcharge is an extra fee that a business or merchant adds to the price of a purchase when payment is made using a credit card instead of cash. The surcharge is often a percentage of the overall purchase cost and can range from 1% to 4%.
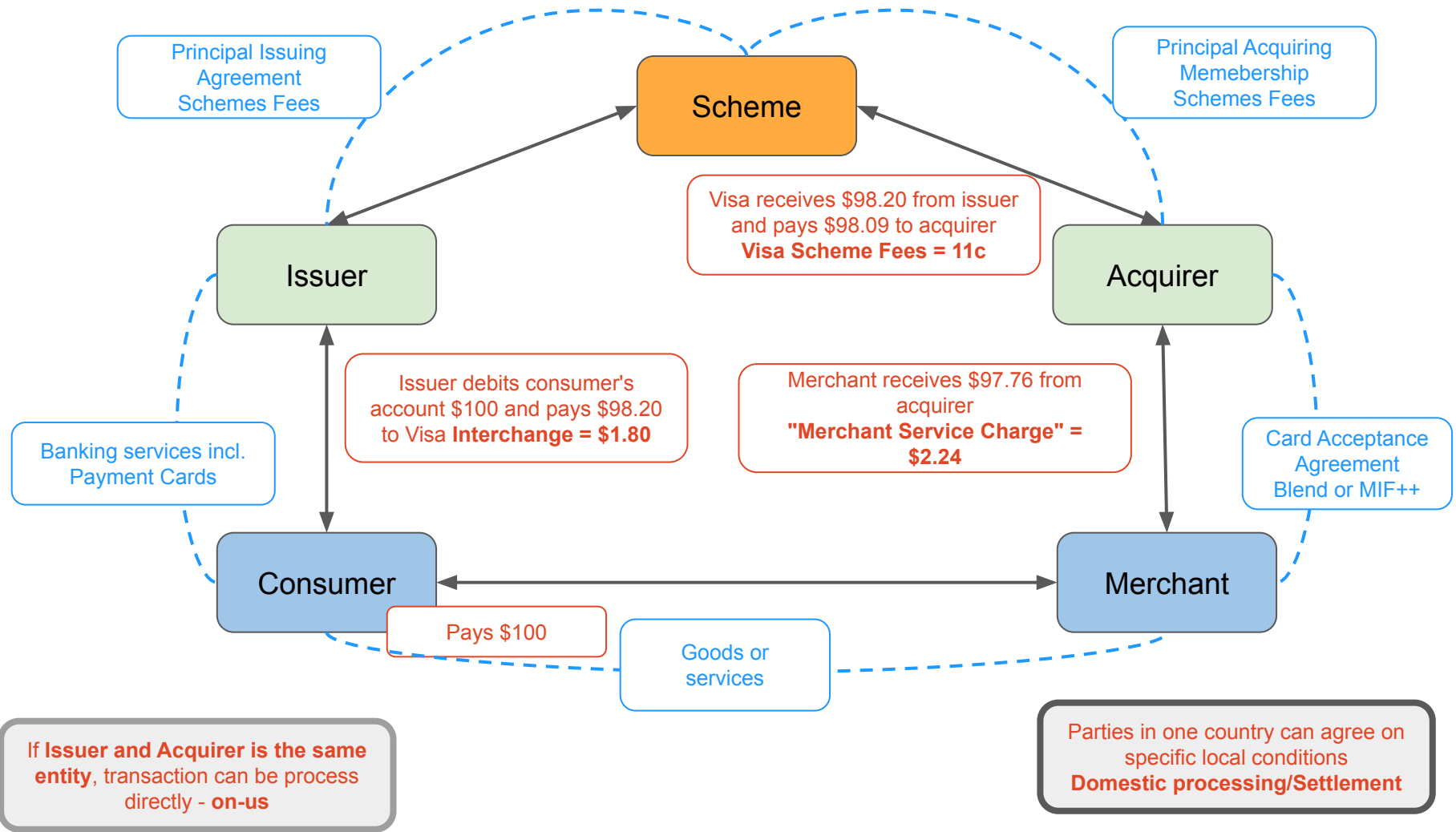
Foreign Transaction Fees

Foreign transaction fees are a predetermined percentage charged by your credit card issuer for making a purchase from a foreign merchant. The fee is clearly stated on your credit card agreement and can range from 0% to 3%. Before you travel, determine what your foreign transaction fee is and if you hold a card that doesn't have one.

Dynamic Currency Conversion (DCC)

While a foreign transaction fee is charged by your credit card issuer, a currency conversion fee can be charged by the credit card payment processor or the individual merchant.these fees must be disclosed as a transaction fee on your card agreement. In most cases, this fee is built into the foreign transaction fee assigned to your card. A foreign transaction fee of 3% may comprise a 2% foreign transaction fee and a 1% currency conversion fee.

Scheme

Issuer

Acquirer

Consumer

Merchant

Principal Issuing Agreement Schemes Fees

Principal Acquiring Memebership Schemes Fees

Visa receives $98.20 from issuer and pays $98.09 to acquirer **Visa Scheme Fees = 11c**

Issuer debits consumer's account $100 and pays $98.20 to Visa **Interchange = $1.80**

Merchant receives $97.76 from acquirer **"Merchant Service Charge" = $2.24**

Banking services incl. Payment Cards

Card Acceptance Agreement Blend or MIF++

Pays $100

Goods or services

If **Issuer and Acquirer is the same entity**, transaction can be process directly - **on-us**

Parties in one country can agree on specific local conditions **Domestic processing/Settlement**

Card processing fees

The whole operation of credit card settlement and processing is notoriously confusing and complex. Still, it's made easy for a price, and that is your card processing fees. This amount is charged to the merchant based on the payment processor he is using.
Payment processors like the fintech providers who provide the payment infrastructure in the selling platform are the ones that collect this fee. It is then split among the other active players in the credit card processing framework.

Credit card processing fees are broken into
- **Interchange:** The commission fee that goes to the issuer bank, non-negotiable.
- **Assessments:** The commission fee that goes to the card network brand, non-negotiable.
- **Markup:** The commission fee that goes to the acquirer processor, negotiable.

Merchant Pricing

Interchange ++
Merchant contract for **Interchange + Scheme Fees + Merchant Service Fee.** This is known as **Interchange ++**. You will be quoted a price for debit and credit cards and that is the price you pay on top of the Interchange & Scheme Fees.

Blend
Merchant has one price for all cards, for small merchants, which known card portfolio

Authorization, Settlement, Clearing, Reconciliation

Authorization of Payment

The merchant passes the card information to the acquirer for authorization of the payment. The acquirer then sends the authorization request to the card network associated with the card. The card network receives the authorization request and routes it to the consumer's bank, which issued the card, for approval. It is the consumer's bank that determines whether the authorization request should be approved or denied and passes that decision back through the same process in reverse order.

Settlement and Funding of Payment

For approved transactions, the acquirer submits a settlement request to the card network on behalf of the merchant. The card network then sends the settlement request to the consumer's bank, which issued the card, for clearing. As part of this clearing process, the card network pulls the funds from the consumer's bank and passes it back to the merchant's acquirer for funding to the merchant. The merchant's acquirer will net out any fees associated with the transaction processing prior to funding the merchant's account. These fees include both the card network's fees as well as the acquirer's fees

What role does the network play in the payment ecosystem?

Card networks play an important role in the payment ecosystem by facilitating the entire authorization, settlement and funding process between the merchant's acquirer and the consumer's bank. By facilitating this complex process, acquirers do not have to interact with each consumer's bank individually.

Card networks also create and govern the rules a merchant must follow to accept the network's cards. Card networks have the authority to penalize a merchant for not following these strict rules by imposing fines or in severe cases prohibiting acceptance of the network's cards.
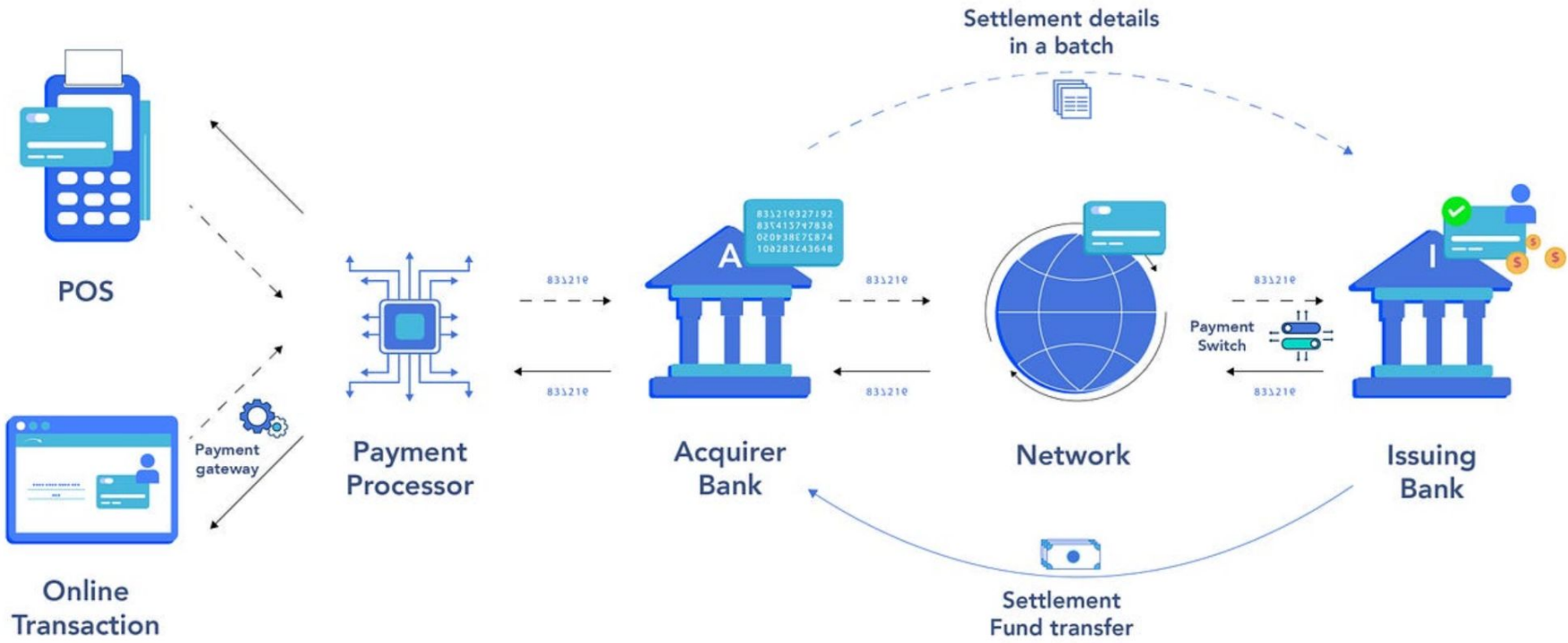
In addition to creating and governing the rules, the card networks set the fees a merchant must pay to accept the network's cards. A large portion of these fees is what is commonly referenced to as "interchange," which is the amount card networks give the consumer's bank for issuing the card.

What role does the financial institution play in the payment ecosystem?

Financial institutions, also referred to as simply the consumer's bank, play a crucial role in the processing of payments. The consumer's bank manages the available balance the consumer has at any given moment. The available balance along with other information received as part of the transaction is what the consumer's bank uses when determining if the transaction should be approved or denied.

For approved transactions, the consumer's bank allows funds to be pulled from the consumer's account and passed to the card network. The card network passes those funds on to the merchant's acquirer, whom deposits the funds into the merchant's account (less any transaction fees).

Card Processing Flow

POS

Online Transaction

Payment gateway

Payment Processor

Acquirer Bank

Network

Payment Switch

Issuing Bank

Settlement details in a batch

Settlement Fund transfer

How is a transaction authorized and settled?

When a consumer pays a merchant for goods and/or services, either online or in-store, the payment is initiated via a swipe, dip, tap, scan or click. The merchant passes the card information to the acquirer, or merchant bank, for authorization of the payment. The acquirer then sends the authorization request to the card network associated with the card. The card network receives the authorization request and routes it to the consumer's bank, which issued the card, for approval. It is the consumer's bank that determines whether the authorization request should be approved or denied and passes that decision back through the same process in reverse order.

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Ultimately, any fees assessed as part of the transaction whether to the merchant or the consumer's bank are also an integral component of the prices merchants charge to all of their customers, whether the customer pays with a card or with cash.

What is the difference between a dual message and a single message transaction?

Dual-message transactions are processed in two steps. The first step involves "authorizing" the transaction by checking with the consumer's bank to make sure funds exist in the cardholder's account. The second step involves the periodic bundling of authorized transactions and sending them to the consumer's bank for posting to the cardholder's account. This process was invented in the 60's and is modeled after the process used to clear and settle paper checks. Most dual message transactions do not require a PIN, but instead require the customer to sign at the POS. Since signatures are not verified real-time by the consumer's bank that issued the card, there is really no way to know when the transaction is fraudulent.

By contrast, single-message transactions require the customer to enter a PIN which is verified real-time by the consumer's bank. PIN transactions are inherently safer and much less prone to fraud since the consumer's bank is validating the PIN is correct before approving the authorization request. Single-message transactions do not require a settlement file to be sent to the consumer's bank.
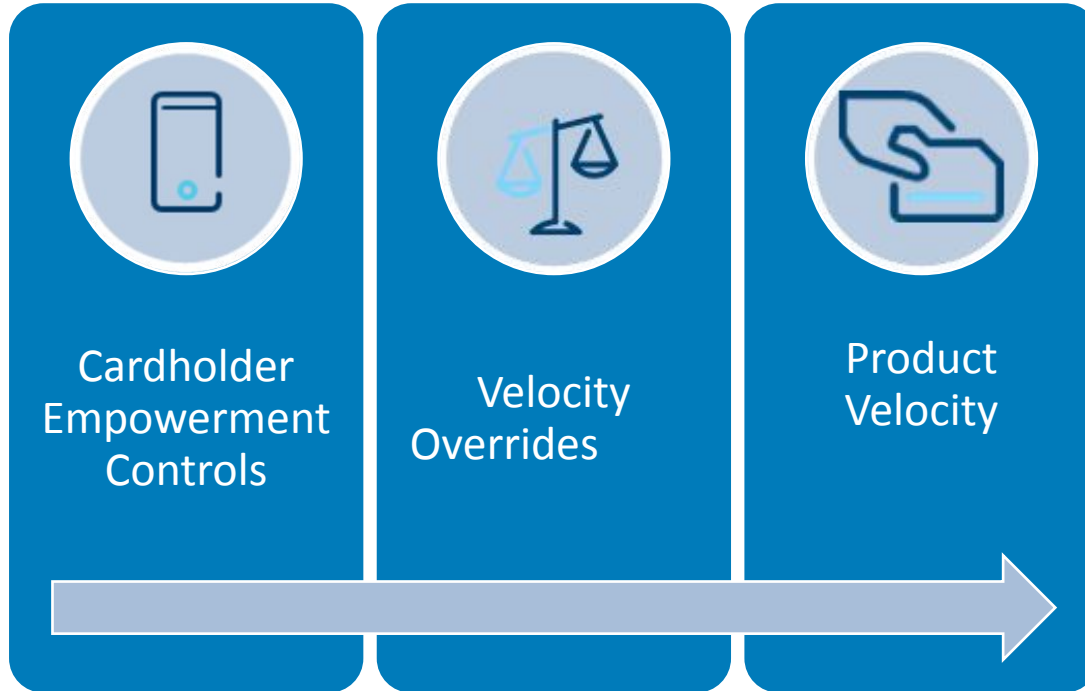
Authorization Types

POS	ATM

POS

- **Purchase / Sales Draft**
- Quasi Cash
- **E-commerce**
- Telephone Order
- Mail Order
- **Recurring Payments**
- **Purchase with Cashback**
- Cheque request
- Credit Voucher / Refund
- Debit Adjustment
- Credit Adjustment

- **Pre-Authorization / Incremental / Completion**
- **Pre-Authorization / Completion**
- **P2P Debit**
- **P2P Credit (OCT)**
- Account Verification
- PIN Validation
- Instalment Inquiry
- Instalment Enrolment
- Cash Advance
- Payment to account– account can be credited

ATM

- **Cash Withdrawal**
- Deposit
- **Linked Account Inquiry**
- Account to Account Transfer
- Mini Statement – Financial
- Mini Statement – Rewards
- Rewards Redemption
- Utility Bill Payment
- **Balance Inquiry – Financial**
- Balance Enquiry - Rewards
- **PIN Unblock**
- **PIN Change**

Authorization Control Flow

Issuer Authorisation Controls – **Criteria**

Classification of an authorization can be done using information of the authorization message, called criteria:

- Merchant Category Codes, ranges and groups (MCC)
- Countries and regions
- Transaction Currencies
- Merchants: Driven by Acquirer ID, Merchant ID, and Terminal ID
- Transaction Types: e.g. MOTO, e-Commerce, ATM Cash, Quasi Cash, Purchase, Credit etc
- Transaction Entry Modes: e.g. Swipe, Key Entry, Voice, 3D Secure frictionless, QR Code etc.
- From/To Card BIN Range
- Source/Destination of the transaction
- Date/Time period of criterion validity
- Transaction Amount (min, max, range)
- Details on the chip of a card (such as the chip application identifier)
- Other transaction specifics (such as presence of PIN/CVV2/cardholder, recurring, token based etc)
- Relational criteria between message and entities (for ex. may compare the transaction, card used or group currency against a defined value)

Non-Financial Checks

- Card PAN
- Card Expiry Date
- Card Activation
- Card Authorization Status
- Card Security Values
- PIN Verification
- PIN Retries
- MCC and ACP Velocities
- ACP Blocking
- Card and Group Usage (ACPs)
- Account Verification
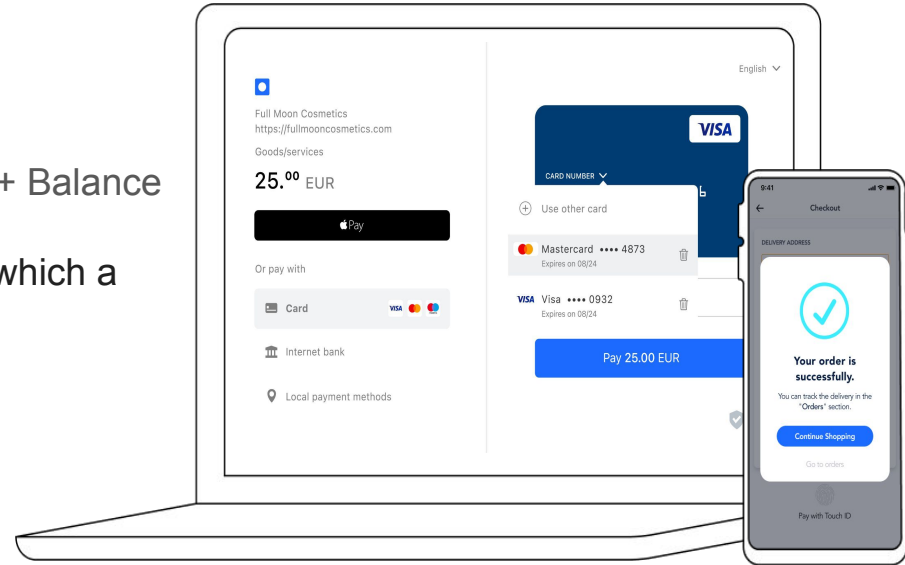- Group Level Velocities
- Etc.
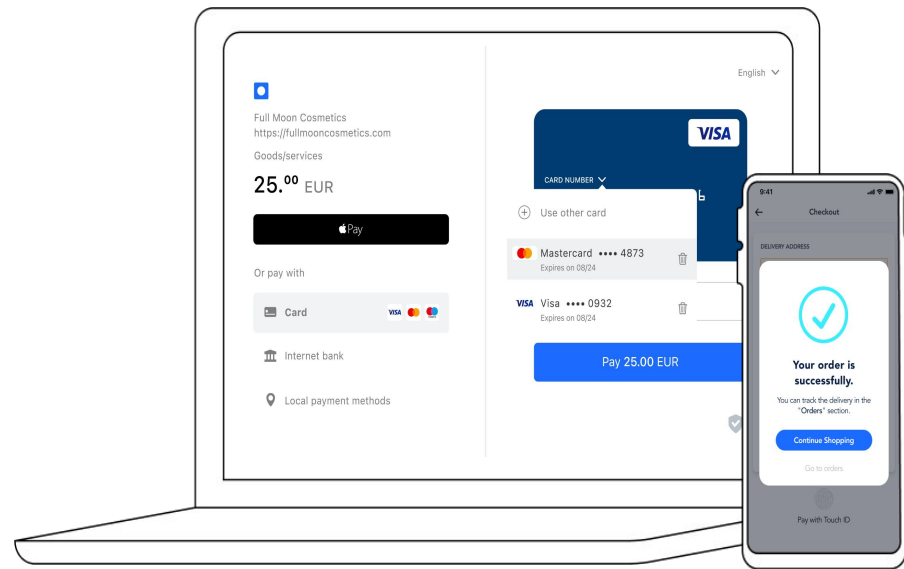
Financial Checks - OTB

Open to Buy (OTB)

OTB = Credit Limit – Outstanding amounts** + Bonus + Balance

** Outstanding amounts: amount of authorizations for which a matching clearing record has not been received.

Total OTB = total available funds for spending

Cash OTB = cash specific available funds (optional)

Cardholder Driven Authorization Controls

Transaction Type
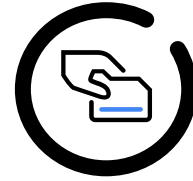- Block / allow based on transaction type

Geographic Country
- Block / allow specific countries or regions

Date and Time
- Specify specific date & time range for card usage per day (start date & time, end date & time, days/months)

Currency
- Block / allow specific currencies

MCCs
- Block / allow specific MCCs

Amount Range
- Specify amount range for single authorization (from and to amount)
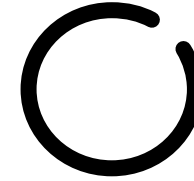
Velocity
- Control velocity settings e.g. min/max trxn. amount and count
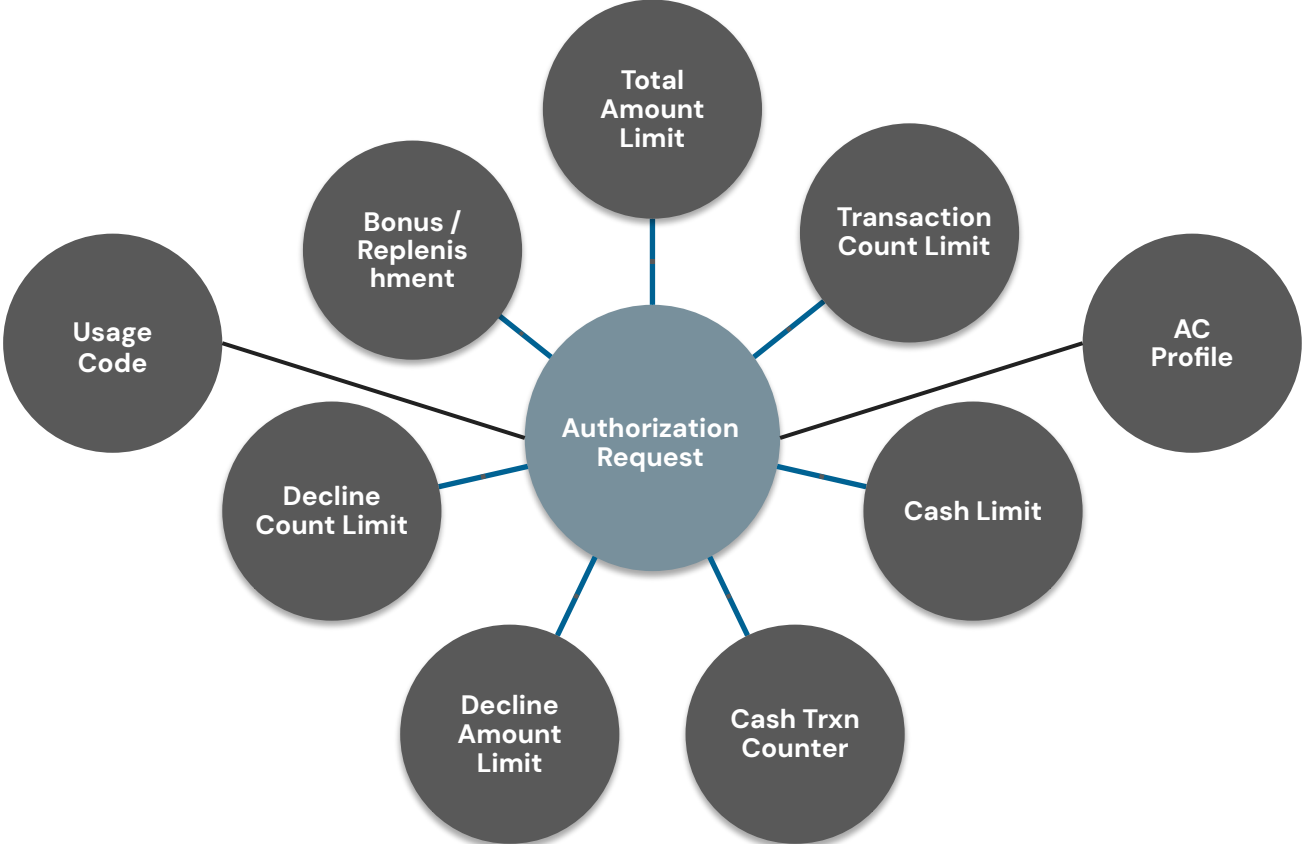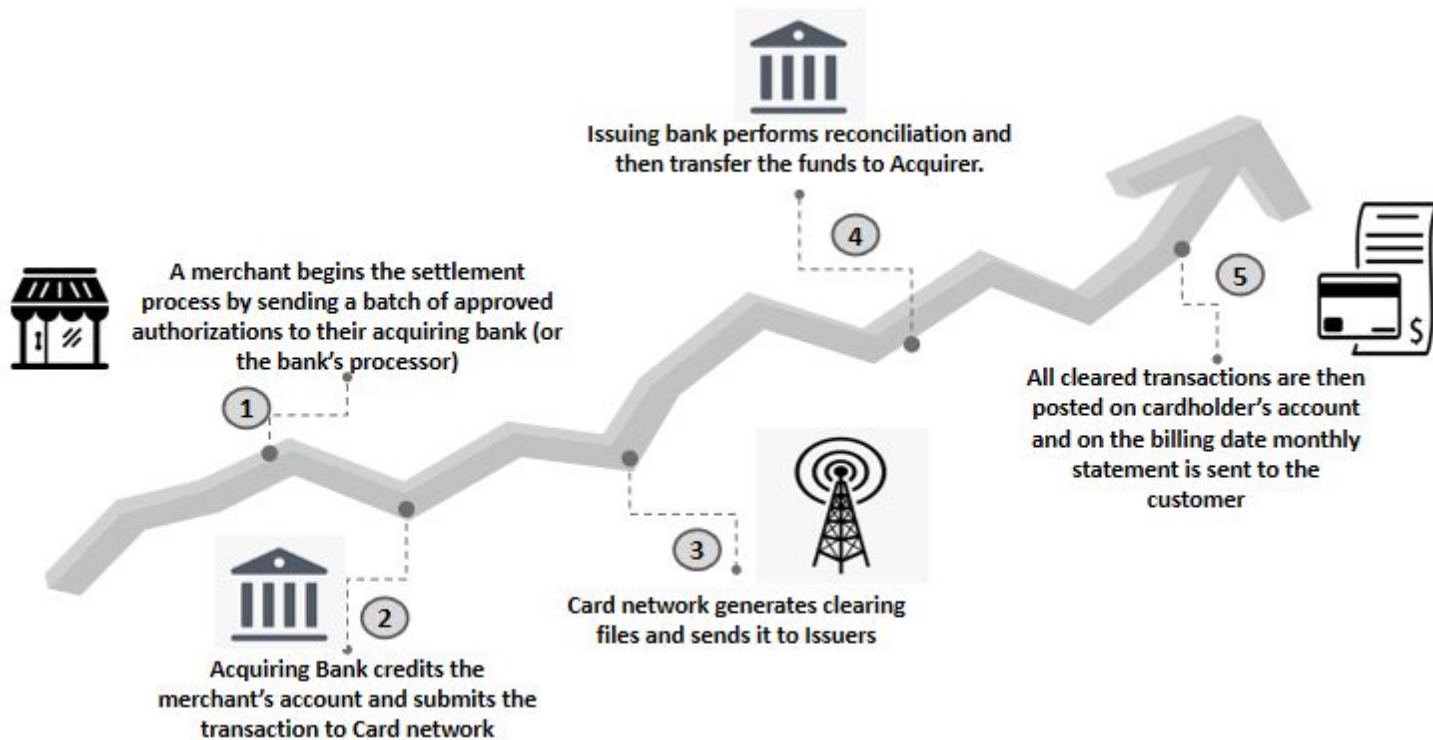
Transaction Entry Mode
- Block / allow entry modes e.g. POS, ATM, contactless, e-commerce

Risk Domain - **Authorisation Controls**

Clearing and Settlement

Issuing bank performs reconciliation and then transfer the funds to Acquirer.

④

A merchant begins the settlement process by sending a batch of approved authorizations to their acquiring bank (or the bank's processor)

①

②

Acquiring Bank credits the merchant's account and submits the transaction to Card network

③

Card network generates clearing files and sends it to Issuers

⑤

All cleared transactions are then posted on cardholder's account and on the billing date monthly statement is sent to the customer

Clearing and Settlement

So to start with, clearing and settlement in financial service industry refers to all activities from the time a commitment is made for a transaction until it is settled. So the transactions which has been successfully authorized by Issuing Bank has to be settled before sales can be deposited into the merchant's bank account. When it comes to Credit card settlement, this is usually being done in three stages:

Stage 1 - Acquiring Settlement
Payments made through credit card is not completed until the transaction information is submitted to the processing bank(Acquiring Bank). Acquirer credits the merchant's account after adjusting the settlement amount with Merchant Discount Rate(MDR) and submits the transaction to card schemes(VISA, MasterCard etc.) in outgoing settlement file

Stage 2 - Clearing
Through this process Issuing Bank exchanges transaction information with the Acquiring Bank. Card networks then further break outgoing settlement files into clearing files and is sent to different Issuing banks.
Clean transactions are billed to the customer and gets reflected in the cardholder's monthly statement. All Bad transactions are sent back as chargebacks to the Acquirer bank through the Card schemes.

Stage 3 - Settlement
Settlement is the exchange of funds between a card issuer and an acquiring bank for all Clean transactions that would be billed to the customer. The cardholder is responsible for repaying his or her issuing bank for the purchases that has been billed on the statement and any accrued interest/associated fees.

Issuing Bank also levies an Interchange fees on the Acquirer and adjust the same while transferring the fund to Acquirer.

Reconciliation

Credit card reconciliation is an accounting process of double-checking and verification of credit accounts. The purpose of financial reconciliations in general is to demonstrate the accuracy and completeness of GL accounts through comparison to external transaction data sources. In this case, incoming or outgoing card payments recorded in the company accounts must be consistent with the payment provider statements of completed transactions.

Issuer Reconciliation   -   Incoming Files and customer Accounts (GL)

Acquirer Reconciliation   -   Outgoing files and Merchant Transactions

Merchant Reconciliation   -   Merchant Settlement and POS transaction

Corporate Reconciliation   -   Account Statement and Expenses

Káva

Typy karet a jejich nákladovost a výnosnost

- Debetní vs. Kreditní karty

- Charge a PrePaid karty

- Elektronické peněženky a alternativní platební metody

- Náklady a výnosy jednotlivých typů karet

- Soukromé vs. Firemní karty

- Životní cyklus platební karty: akvizice, aktivace, „Usage", retence

- Co-brandované karty – pozitiva a negativa, příklady projektů

What is Debit Card?

Debit card, also known as a **ATM card** or **bank card,** is a payment card that can be used in place of cash to make purchases.

The card usually consists of the bank's name, a card number, the cardholder's name, and an expiration date, on either the front or the back.

Many of the new cards now have a chip on them, which allows people to use their card by touch (contactless), or by inserting the card and keying in a PIN as with swiping the magnetic stripe.

Money for the purchase must be in the cardholder's bank account at the time of the purchase and is immediately transferred directly from that account to the merchant's account to pay for the purchase

Advantages of Debit Card

- One of core product for retail and corporate banking allowing quick and convenient to buy good and access cash

- Able to reduce the risk of getting in to credit card debt, by ensuring you're spending your own money, and not over-extending customer by getting a credit card balance you may not be able to repay.

- Any purchase that you make on your card is covered and protected by Scheme Zero Liability policy.

- It's a lot more convenient, easier and safer than carrying cash or using your EFTPOS card.

- Access your transaction records for your card online instantly through internet banking.

- You don't need a good credit history. When applying for a VISA Debit Card, the banks don't do a credit check, making the application process fast (and painless!)

Charge and Credit Cards

Front View

1. Issuing Bank logo
2. EMV chip (only on "smart cards")
3. Hologram
4. Card number
5. Card Network logo
6. Expiration date
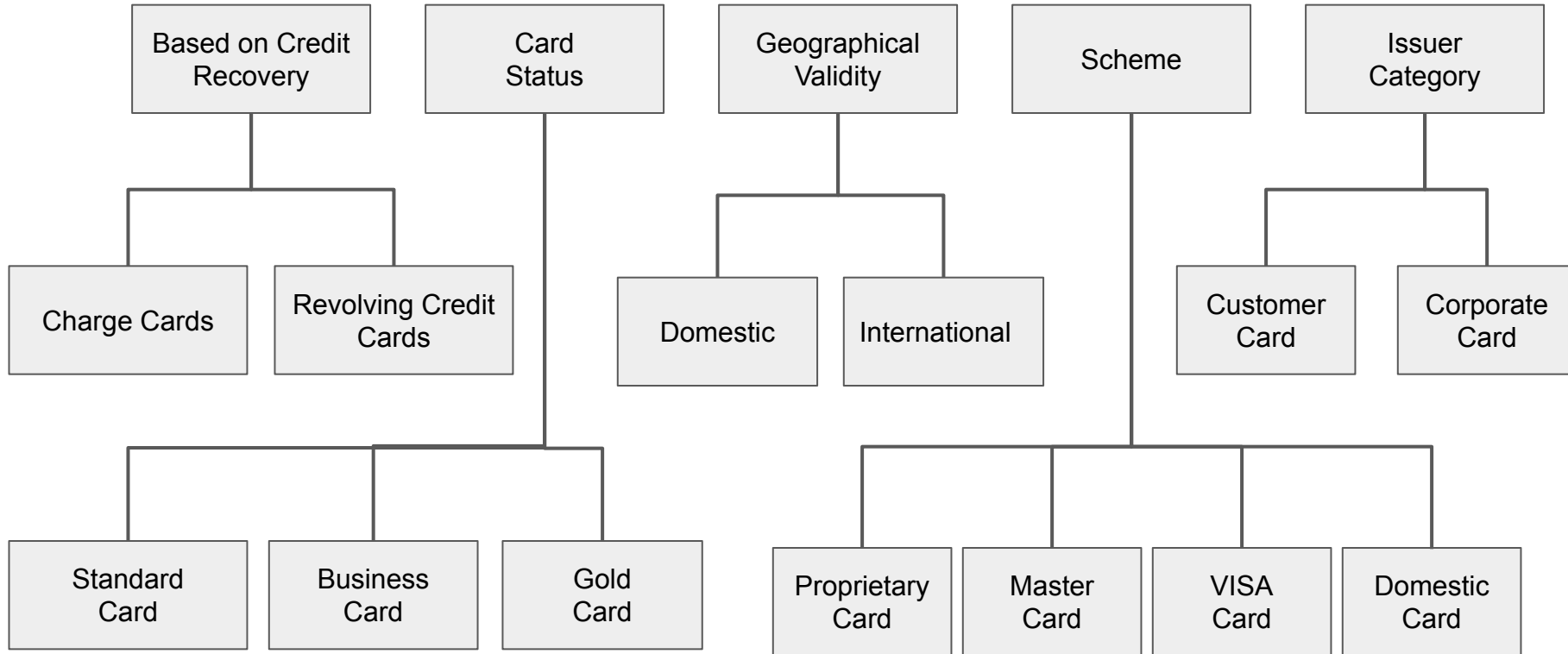7. Cardholder's name
8. Contactless Chip
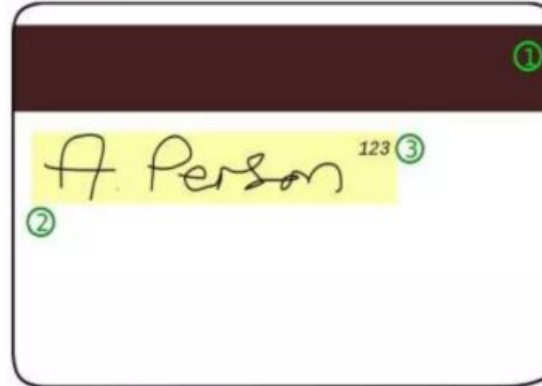
Back View

1. Magnetic stripe
2. Signature strip panel
3. Card Security Code

Wearable

Classification of Credit Cards

Credit Card   vs.   Debit Card

Credit Card	Debit Card
Borrowing money from a bank or financial institution. (Spending "other's" money)	Funds taken from the money that you have in your bank account. (Spending your "own" money)
Need not be connected to any bank account	Needs checking Account/Savings Account
Pay additional interest drawn on the amount borrowed	No interest to be paid
Limit: Credit line	Limit: Equals your account limit
Generates profit for Bank	Customer Service

How credit card works

Grace period is the period of time between the date of a purchase on your card and the due date listed on your statement. During this period, if you pay your bill in full by the due date, no interest charges accrue.

But if you carry a balance month to month, your card issuer can charge you **interest**. Your credit card's **annual percentage rate (APR)** reflects the cost of carrying a balance on an annualized basis. Your APR includes both your interest rate and other costs, such as an annual fee if your card has one.

Rewards

Rewards credit cards offer you some type of "reward"—typically cash back, points, or travel miles—for every dollar you spend, sometimes up to certain limits. Depending on the card, you can then use your rewards in a variety of ways.

- Rewards credit cards typically offer cash back, points, or travel miles for every dollar you spend.
- Rewards cards make the most sense for consumers who pay their balance in full each month. Otherwise, the interest charges could easily exceed your rewards.
- The best rewards card for you will depend on your everyday spending habits and how you plan to redeem your rewards.

Credit Card Fees

ATM transaction fee: If you withdraw cash from an ATM that's not affiliated with the bank that issued your debit card, you may be charged an ATM transaction fee. These fees are also called "out-of-network" fees.

Insufficient funds fee: If you use the card to spend more than you have in your account, you can face an insufficient funds charge. These fees are also called non-sufficient funds (NSF) fees.

Overdraft fee: If you've registered for overdraft protection and spend more than your limit, your purchase will go through, but you will incur overdraft fees.

Replacement card fee: You might incur a replacement card fee if your debit card is lost, damaged, or stolen and you need to order a new card.

Foreign transaction fee: If you use your debit card to make a purchase in a foreign currency, you could get charged a foreign transaction fee, such as 3% on the transaction amount.

Alternative Payment Methods

Seventy-seven percent of global online (20-30% in CZ) purchases are made with a local or alternative payment method rather than with a payment card. Sometime they covers specific need, provide better user experience or lower costs for acceptance

- Bank transfers
- Buy now, pay later
- Card-based payment methods
- Card wallets
- Carrier billing
- Cash-based payment methods
- E-wallets
- Mobile wallets
- Pass-through wallet
- Prepaid vouchers
- Virtual cards

eWallets

An e-wallet is a secure money management app or online platform that allows you to make purchases with retailers on-site, transfer or send money and track rewards programs. You can link the e-wallet to your bank account or pay as you go with a prepay option.

E-wallets are mobile or computer-based applications that facilitate online transactions, cashless in-store payments and peer-to-peer transfers.

E-wallets store credit cards, debit cards, boarding passes, identification cards, membership cards and more in a digitalised form all in one place.

- Apple Pay, Google Pay, Samsung Pay

- Revolut,Twisto

- Paypal, Amazon Pay, Curve

Card related Costs and Profit

Issuer

Costs

- Operational and infrastructure Costs
- Transaction Processing Fees
- Scheme Costs
- Compliance and Regulatory Costs
- Fraud and Security Costs
- Card Production Costs
- Rewards and Incentives
- Chargeback

Profit

- Interchange Fees
- Foreign Exchange Fees
- Interest Income (for Credit Cards)
- Annual Fees
- Late Payment Fees and Penalties
- Cross-Selling and Upselling
- Investment Income

Acquirer

Costs

- Card acceptance (POS, eCommerce)
- Sales network

Profit

- Markup on Merchant Services Charge
- Value Added Services

Fee **Types**

Transaction Fees
- Cash Advance Fee at CXB ATMs
- Cash Advance Fee at non-CXB ATMs
- Balance Inquiry Fee
- ATM Mini Statement Fee
- etc

Service Fees – Card
- Card Replacement Fee
- Card Issuance Fee
- Primary Card Annual Fee
- Supplementary Card Annual Fee
- Photo Card Fee (manual Fee)
- Card Delivery Fee
- Installment One Time Fee

Service Fees – Account
- Paper Statement Fee
- Advance Payment Manual Fee
- Installment One Time Fee
- Direct Debit Setup Fee

Consumer vs. Corporate Cards

Feature	Customer Card	Corporate Cards
Usage	These are typically issued to individuals for personal use	These are designed for businesses and are used by employees on behalf of the company
Ownership	Owned and issued to individual consumers	Owned by the company and issued to its employees for business-related expenditures
Liability	Individual cardholder	Company is typically liable, some corporate cards may offer individual liability of the employee
Credit Limit and Spending Control	Individual's creditworthiness and financial history	By the company, and it may have features that allow for controls on employee spending limits and categories
Rewards and Perks	Rewards programs, cashback, or other perks tailored for individual consumers	Business-related expenses, such as travel rewards, discounts on business services, or expense management tools
Expense Tracking and Reporting	Primarily for personal use and finance management	Features for expense tracking, reporting, and integration with corporate accounting systems to facilitate business expense management

Card Lifecycle

1. New Card
2. Card Reissue
3. Card Replacement
4. Card Renewal
5. Product Change

New Card

When a new card record is created in CMS, a service is applied to the record indicating that it **is scheduled for embossing** as a result of new card creation.

New card creation:

- Card Number
  - New card number is assigned to the new card as per the product number ranges configuration.

- Expiry Period
  - Defined in the card configuration
  - Ability to define shorter expiry period for new cards and longer for renewals.

- Configurable PIN options

- Configurable card activation options.

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Card Renewal

- Card will keep the **same card number.**

- When a card is renewed **the expiry date** of the card is calculated according to the period set in the card application configuration.

- Auto renewal for a card is processed prior to the expiry date of the existing plastic (as per system configuration).

- Option to set 'No renewal' months (i.e. holiday periods).

- Configurable PIN behaviour.

- Configurable card activation options.

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Card Replacement

- Used for lost or stolen cards. 'Lost' or 'Compromised' card status is applied to old card record.

- **New PAN** and new card record.

- Configurable PIN journey.

- Configurable expiry period can be assigned.

- Option to generate a text transaction to appear on the card statement.

- Support for Mass Card replacement.

- Configurable PIN behaviour options.

- Configurable card activation options.

Card Reissue

- Embossing of **identical card plastic**.

- Used for cards returned damaged / inoperable.

- Existing encoding details are used for embossing (same expiry date, CVV, etc.).

- Card will have same card number and same expiry date and same activation / functional status.

- When the Reissue request is close to the card's expiry date, PRIME can be configured to only allow the 'Renew Card' option.

Card Product Change
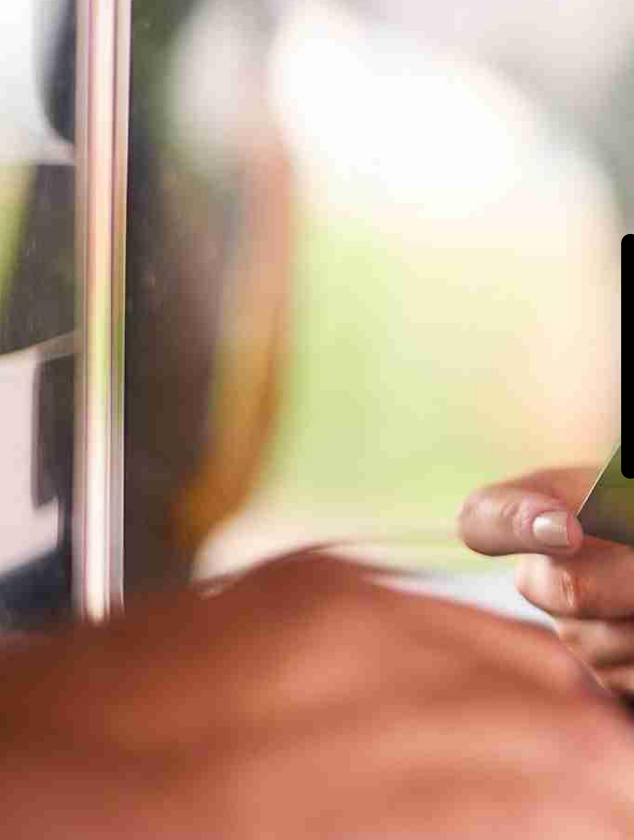
Card **Upgrades / Downgrades** can be supported when:

1. **Pricing** or **Service** has been upgraded / downgraded
   - Card **product** remains the same
   - Card **plastic** remains the same
   - **No** card production required

2. **Card Product** has been upgraded / downgraded
   - New plastic is typically produced
   - Support for product mapping paths (allowed 'from' and 'to' products)
   - PAN may or may not change depending on configuration
   - Specific card values are transferred to new card (PIN etc.)

Card Production Functions

Card Production Triggers
- Triggered whenever a new card record is created in the system, or a new card plastic is required for an existing record.

PIN Management
- PIN generation options
- PIN generation per card production journey
- PIN management options via APIs
- Reissue or replace PIN
- Security data generation

Embossing File Generation
- The ability to include data in the embossing file from various sources – provided data exists within the database
- Generate different embossing file segregation (e.g. by product) – if needed.

Card Activation Options
- No Activation
- Manual Activation
- Automatic Activation
- Activation via API

Co-Branded Cards

Co-branded cards are payment cards that carry the branding of both a financial issuing institution (like a bank or credit card company) and a non-financial partner, typically a retail merchant, airline, hotel chain, or other businesses.

KEY TAKEAWAYS

- A co-branded card is issued by two parties—typically, a retailer and a card issuer or card network—and usually bears the logos of both.
- Co-branded cards can be used anywhere that type of card (such as a Visa or Mastercard) is accepted.
- Airlines were the earliest adopters of co-branded cards.
- Many retail stores offer co-branded cards in addition to their own proprietary cards.
- Co-branding allow private brand cards to be accepted outside of the close network
- Scheme fees are usually decreased if used in close network
- More expensive than close loop cards

USES CASES

- Coobrand with local scheme (e.g. Girocard or Carte Bancaire) for acceptance outside of domestic network
- Meal Vouchers - benefit from acceptance network and special interchange fee
- Retailer card   - business case is usually build on credit card)

Děkuji za pozornost